1. A spread spectrum based multichannel modulation UWB communication transceiver comprising:

a multichannel PN sequence mapping; and a PN sequence look-up table.

2. The transceiver of claim 1 wherein said multichannel PN sequence mapping is used to generate 11-multichannel UWB signal, with each of multichannel UWB signal at the chip data rate of 650 Mcps.

3. The transceiver of claim 1 wherein said PN sequence look-up table produces 16-orthogonal spreading sequence with 16-bit code.

4. The transceiver of claim 1 wherein said 11-multichannel produced from said multichannel PN sequence mapping are all orthogonal each other.

5. The transceiver of claim 1 wherein said number of multichannel may be selected to produce the scalability data rates for the UWB system.

6. A multichannel PN sequence mapping comprising:

a set of delay units; a set of down-sampling units; and a set of XOR units to form the multichannel.

7. The multichannel PN sequence mapping of claim 6 wherein said delay and down-sampling units forms a set of multichannel, which may be equivalent and implemented in parallel.

8. The multichannel PN sequence mapping of claim 7 wherein said set of multichannel is equivalent to the implementation structure of polyphase-based multichannel.

9. The multichannel PN sequence mapping of claim 8 wherein the analyzed sequence switch, which is equivalent to the implementation structure of polyphase-based multichannel, is a counterclockwise circuit that takes on one of the positions with rotating at uniform speed.

10. The multichannel PN sequence mapping of claim 6 wherein the XOR units are used to perform a logic operation to spread one-symbol with 16 PN chip sequences for the entire multichannel.

11. The multichannel PN sequence mapping of claim 10 wherein said 16 PN chip sequences are orthogonal each other for the entire multichannel.

12. The multichannel PN sequence mapping of claim 11 wherein said all of the multichannel are orthogonal.

13. A digital lowpass FIR shaping filter coupled to the multichannel PN sequence mapping comprising:

a lowpass band;

a first transition band;

a second transition band;

a third transition band; and

a stop band.

14. The digital lowpass FIR shaping filter of claim 13 wherein said digital lowpass FIR lowpass shaping filter has the lowpass band 0 - 0.26 GHz, the first transition band 0.26 - 0.325 GHz; the second transition band 0.325 - 0.39; the third transition band 0.39 - 0.45; and the stop band 0.45 - 0.5 GHz.

15. The digital lowpass FIR shaping filter of claim 13 wherein said only one digital lowpass FIR shaping filter is needed for the use in all of said multichannel.

16. A multichannel based multi-carrier modulation comprising:

a analog lowpass filter;

a commuter unit; and

selectable multi-carrier frequencies.

17. The multichannel based multi-carrier modulation of claim 16 wherein said commuter unit produces one of the multi-carrier frequencies by controlling a switch.

18. The multichannel based multi-carrier modulation of claim 17 wherein said selectable multi-carrier frequencies contain all of the multichannel carrier frequencies in which may be programmable to control the multichannel.

19. The multichannel based multi-carrier modulation of claim 17 wherein said switch can control to select some of the multichannel carrier frequencies for use in the transmitting data to avoid the interference with WLAN 802.11a.

20. The multichannel based multi-carrier modulation of claim 19 wherein the transceiver may not use the fourth or fifth and/or both of the channels for transmitting data to avoid the interference with WLAN 802.11a by controlling said switch.

21. A multichannel based multi-carrier down converter comprising:

a analog bandpass filter;

a down converter unit;

a multichannel filter;

a commuter unit; and

selectable multi-carrier frequencies.

22. The multichannel based multi-carrier down converter of claim 21 wherein said down converter produces the multi-baseband signals by using multi-carrier frequencies from the commuter unit in which is controlled by using a switch.

23. The multichannel based multi-carrier down converter of claim 22 wherein said selectable multi-carrier frequencies contains all the multichannel carrier frequencies that are programmable with scalability.